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=> file fsta

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FILE LAST UPDATED: 26 AUG 2003 <20030826/UP>

FILE COVERS 1969 TO DATE.

>>> THE NEW 2003 EDITION OF THE FSTA THESAURUS IS AVAILABLE NOW <<<

=> s allanblackia or pentadesma

0 ALLANBLACKIA

2 PENTADESMA

L1 2 ALLANBLACKIA OR PENTADESMA

=> d l1 all 1-2

L1 ANSWER 1 OF 2 FSTA COPYRIGHT 2003 IFIS on STN

AN 1979(09):N0418 FSTA

TI [Potential for development of oil plants in Zaire.]

In 'Proceedings of the 13th World Congress. Symposium 4' [see FSTA (1979) 11 9N391].

AU Kabele Ngiefu, C.; Vieux, A.; Paquot, C.; International Society for Fat Research 3[13th Congress, Symposium 4]

CS Univ. Nat. du Zaire, Fac. des Sci., Kinshasa 11, Zaire

SO (1976), pp. 63-66, 2 ref.

DT Conference

LA French

AB 200 000 t/yr of palm oil is produced in Zaire, but the country is also suited to the production of other vegetable oils. A survey was made of oil-bearing plants now growing in Zaire and the fatty matter extracted from about 60 spp. was subjected to detailed analysis. Of these, 12 produced fruits or seeds considered to be suitable for commercial exploitation as a source of oils for food use, soap manufacture or production of stearins. Potential food spp. were: *Irvingia gabonensis*, a large tree bearing fruits with a large kernel containing 67% oil resembling palm oil in composition; **Pentadesma** butyracea (tree),

from which a fat can be extracted (known locally as Sierra Leone butter) with a m.p. around 35.degree. C and 92% content of C18 acids; Terminalia catapa (tree), with fruits containing a fluid oil (solid at 7.degree. C) similar to almond oil; and Citrullus vulgaris, the water melon, an annual plant containing large quantities of a fluid oil (70% linoleic acid) with a potential yield exceeding that of soybean. 2 other spp. might be developed later for food use.

CC N (Fats, Oils and Margarine)

CT OILS VEGETABLE; PLANTS; OIL PLANTS; POTENTIAL; ZAIRE

L1 ANSWER 2 OF 2 FSTA COPYRIGHT 2003 IFIS on STN

AN 1977(08):N0425 FSTA

TI Fatty acid composition and characteristics of **Pentadesma** butyracea fat extracted from Ghana seeds.

AU Adomako, D.

CS Cocoa Res. Inst., PO Box 8, Tafo, Ghana

SO Journal of the Science of Food and Agriculture, (1977), 28 (4) 384-386, 12 ref.

DT Journal

LA English

AB Fat extracted from seeds of the tallow tree (**Pentadesma** butyracea S) was analysed for its chemical and physical constants and fatty acid (FA) composition. These characteristics were compared with those of cocoa butter and shea butter. Dry tallow kernels, shea butter kernels and cocoa beans contained 50, 52.1 and 53.4% fat, respectively. Tallow fat and shea butter were similar in several of their characteristics, particularly slip point, saponification number, solidification point and FA composition; but tallow fat had a much lower unsaponifiable matter content (1.5-1.8%) than shea butter (7.3-9.0%). Both were markedly different from cocoa butter and cocoa butter replacement fats in respect of their mp and FA composition [FA components (as % of total) for tallow fat, shea butter and cocoa butter include: palmitic, 3.1, 4.8, 26.8; stearic, 45.5, 45.9, 36.1; and oleic, 50.5, 40.8, 31.9]. Cooling curves of 3:1, 1:1, and 1:3 mixtures of tallow fat and cocoa butter indicated poor compatibility between the 2 fats.

CC N (Fats, Oils and Margarine)

CT COCOA BUTTER; FATS; FATS ANIMAL; FATS VEGETABLE; FATTY ACIDS; OILSEEDS; FATS (VEGETABLE); SHEA NUT BUTTER; TALLOW; TALLOW TREE SEED FATS

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

4.42

4.63

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FILE COVERS 1907 - 29 Aug 2003 VOL 139 ISS 10

FILE LAST UPDATED: 28 Aug 2003 (20030828/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s allanblackia or pentadesma  
25 ALLANBLACKIA  
27 PENTADESMA  
L2 47 ALLANBLACKIA OR PENTADESMA

=> d l2 cbib,ab 1-47

L2 ANSWER 1 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

2003:511047 Document No. 139:68297 Hydrogenated fat tempering composition for confectionery products. Cleenewerck, Bernard; Nakamura, Ichiro; Van Imschoot, Maarten Dieter (Fuji Oil Europe, Belg.). PCT Int. Appl. WO 2003053152 A2 20030703, 25 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2002-BE194 20021220. PRIORITY: WO 2001-BE218 20011220.

AB The present invention relates to a tempering fat compn. for confectionery products. The tempering fat compn. contains 1-100 wt.% of a partially hydrogenated first fat, the first fat contg. at least 5 wt.% of S2E, at least 50 wt.% of S2U, and having a TFA:.DELTA.IV ratio of at least 2, in which TFA is the amt. of unsatd. fatty acids in the trans configuration in the partially hydrogenated first fat in wt.% and .DELTA.IV is the difference in iodine value of the first fat before hydrogenation and after hydrogenation, E is trans-iso-oleic acid, S is a satd. fatty acid having 10-24 carbon atoms and U a mono- or polyunsatd. fatty acid having 18-22 carbon atoms. The tempering fat compn. may contain 0-99 wt. % of a non-hydrogenated second fat. The invention also relates to a process for producing a tempering vegetable fat compn.

L2 ANSWER 2 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

2002:941325 Document No. 138:218292 Phylogeny of Clusiaceae based on rbcL sequences. Gustafsson, Mats H. G.; Bittrich, Volker; Stevens, Peter F. (Department of Systematic Botany, Institute of Biological Sciences, University of Aarhus, Risskov, 8240, Den.). International Journal of Plant Sciences, 163(6), 1045-1054 (English) 2002. CODEN: IPLSE2. ISSN: 1058-5893. Publisher: University of Chicago Press.

AB Phylogenetic models of the Clusiaceae have so far been based on morphol. data only. As an addnl. source of phylogenetic information, the chloroplast gene rbcL was sequenced for 26 species, representing all available genera of Clusiaceae. The DNA data were analyzed cladistically together with previously published sequences. The results show that the aquatic family Podostemaceae is nested inside Clusiaceae as the sister group of subfamily Hypericoideae or tribe Hypericeae. The subfamilies Kielmeyeroideae and Clusioideae, as delimited in recent morphol.-based classifications, are largely supported as monophyletic. The sole exception is Clusiella, which links with Kielmeyeroideae rather than with Clusioideae. We conclude that pollination by resin-collecting bees arose independently in Clusiella and the Clusioideae: Clusieae.

L2 ANSWER 3 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

2002:408458 Document No. 136:401002 Food spread containing **Allanblackia** or **Pentadesma** fat. Floeter, Eckhard; Hendrickx, Henricus Arnoldus; Van Oosten, Cornelis Willem; Stellema, Cornelis Sjouke (Unilever N.V., Neth.; Unilever P.L.C.; Hindustan Lever Ltd.). PCT Int. Appl. WO 2002041699 A1 20020530, 17 pp. DESIGNATED

STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-EP12273 20011022. PRIORITY: EP 2000-204120 20001121; EP 2001-201916 20010521.

- AB An edible W/O emulsion spread comprises a continuous fat phase which contains a natural structuring hardstock fat, which hardstock fat contains .gtoreq.45 wt.% of SOS triglyceride (where S is C18-C24 fatty acid residue and O is an oleic acid residue). A fat with such compn. may be isolated from plants belonging to the genus **Allanblackia** or the genus **Pentadesma**. Thus, a pre-emulsion to be used in a margarine fat blend comprises 70% rapeseed oil and 30% **Allanblackia floribunda** fat.

L2 ANSWER 4 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

2002:408457 Document No. 136:401001 Food spread containing

**Allanblackia** or **Pentadesma** fat. Floeter, Eckhard; Hendrickx, Henricus Arnoldus; Van Oosten, Cornelis Willem; Stellema, Cornelis Sjouke (Unilever N.V., Neth.; Unilever P.L.C.; Hindustan Lever Ltd.). PCT Int. Appl. WO 2002041698 A1 20020530, 16 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-EP12272 20011022. PRIORITY: EP 2000-204120 20001121; EP 2001-201916 20010521.

- AB An edible W/O-emulsion spread is formed in which the fat phase comprises a vegetable hardstock fat, the hardstock fat contg. .gtoreq.5 wt.% of **Allanblackia** fat and(or) **Pentadesma** fat and which preferably contains .gtoreq.45 wt.% of SOS triglycerides (where S denotes a fatty acid residue with a satd. C18-C24 carbon chain and O denotes an oleic acid residue). Thus, a pre-emulsion to be used in a margarine fat blend comprises 70% rapeseed oil and 30% **Allanblackia floribunda** fat.

L2 ANSWER 5 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

2002:382786 Document No. 137:291605 A prenylated xanthone from

**Allanblackia floribunda**. Nkengfack, Augustin E.; Azebaze, Guy A.; Vardamides, Juliette C.; Fomum, Zacharias T.; van Heerden, Fanie R. (Faculty of Science, Department of Organic Chemistry, University of Yaounde I, Yaounde, Cameroon). Phytochemistry, 60(4), 381-384 (English) 2002. CODEN: PYTCAS. ISSN: 0031-9422. Publisher: Elsevier Science Ltd..

- AB A new prenylated xanthone, named allanxanthone A, was isolated from the stem bark of **Allanblackia floribunda** in addn. to known compds., 1,5-dihydroxyxanthone, 1,5,6-trihydroxy-3,7-dimethoxyxanthone, stigmasterol and stigmasteryl-3-O-.beta.-D-glucopyranoside. The structure of the new compd. was assigned as 1,3,5-trihydroxy-2-(3-methylbut-2-enyl)-4-(1,1-dimethylprop-2-enyl)xanthone, by means of spectroscopic anal. The <sup>13</sup>C NMR spectral data of 1,5-dihydroxyxanthone is reported here for the first time as well as the in vitro cytotoxic activity of xanthone metabolites against the KB cell line.

L2 ANSWER 6 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1998:736142 Document No. 130:92792 Guttiferone F, the First Prenylated

Benzophenone from **Allanblackia stuhlmannii**. Fuller, Richard W.; Blunt, John W.; Boswell, Jamie L.; Cardellina, John H., II; Boyd, Michael R. (Laboratory of Drug Discovery Research and Development Developmental

Therapeutics Program Division of Cancer Treatment and Diagnosis, National Cancer Institute-Frederick Cancer Research and Development Center, Frederick, MD, 21702-1201, USA). Journal of Natural Products, 62(1), 130-132 (English) 1999. CODEN: JNPRDF. ISSN: 0163-3864. Publisher: American Chemical Society.

- AB The HIV-inhibitory activity in exts. of *Allanblackia stuhlmannii* was tracked, via bioassay-guided fractionation, to a new member of the camboginol/guttiferone class of prenylated benzophenones, guttiferone F (I). The structure was solved by extensive NMR analyses and by acid-catalyzed conversion to 30-epi-cambogin. This is the first report of I in the genus *Allanblackia*.

L2 ANSWER 7 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN  
1995:797935 Document No. 123:284113 Comparison of lipid compositions in Shea butter and *Pentadesma* butter. Dencausse, Laurent; Ntsourankoua, Herve; Artaud, Jacques; Clamou, Jean-Luc (Laboratoire d'Analyse et Valorisation des Biomolécules, IUT, Marseille, 13388/13, Fr.). Oleagineux, Corps Gras, Lipides, 2(2), 143-7 (French) 1995. CODEN: OCLOEX. ISSN: 1258-8210. Publisher: Libbey Eurotext.

- AB Shea butter (SB) (*Butyrospermum parkii*, Kotschy, Sapotaceae) and *Pentadesma* butter (PB) (*Pentadesma butyracea*, Sabine, Guttiferae) were extd. from the almonds of the fruits of African trees. The two butters have similar phys., chem. and cosmetic properties. Their fatty acid compn. was characterized by stearic (C18:0) and oleic (C18:1 .omega.9) acids which represented more than 88% of the total fatty acids. The unsaponifiable fractions (SB: 4.2%, PB: 1.5%) were essentially triterpene alcs. The main ones were .alpha. and .beta.-amyrine, butyrospermol and lupeol. The two fats differed in their sterolic compn.: .DELTA.7-sterols (.alpha.-spinasterol and .DELTA.7-stigmasterol) for SB and a mixt. of .DELTA.5 and .DELTA.7-sterols for PB. Stigmasterol is the major sterol in PB, which is rarely encountered in nature.

L2 ANSWER 8 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN  
1994:481490 Document No. 121:81490 Surface treatment composition. Pedersen, Arne; Johannsen, Frank (Aarhus Oliefabrik A/S, Den.). PCT Int. Appl. WO 9407373 A1 19940414, 51 pp. DESIGNATED STATES: W: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, VN; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1993-DK308 19930924. PRIORITY: DK 1992-1190 19920925.

- AB A compn. for use as a substitute for petrolatum and for surface treatment of confectionery and other food products as well as for external treatment of animals and plants comprises an oxidn.-resistant glyceride oil and/or liq. wax, a solid wax, a structuring fat, and optionally crystn. inhibitors, hydrolysis inhibitors, food product ingredients, additives to food products, diet supplements, bioactive substances, cosmetic ingredients, pigments, and solvents. The solid is omitted if liq. wax is present. The compn. has a semi-transparent, petrolatum-like structure, high taste and smell stability, good gloss and anti-sticking effect, regulated adhesion and a very fine crystal structure.

L2 ANSWER 9 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN  
1992:619774 Document No. 117:219774 Fat compositions and their use in cosmetic and pharmaceutical emulsion products. Johannsen, Frank (Aarhus Oliefabrik A/S, Den.). PCT Int. Appl. WO 9216184 A1 19921001, 21 pp. DESIGNATED STATES: W: JP, US; RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1992-DK80 19920313. PRIORITY: DK 1991-467 19910315.

- AB A fat compn. for cosmetic or pharmaceutical emulsion products, comprises a mixt. of mono-, di-, and triglycerides, wherein .gtoreq.90% wt. of fatty acid residues incorporated in the glycerides contain 16-22 C from vegetable oils. The compn. serves as an emollient and, a coemulsifier in the emulsion product and the consistency of the emulsion can be adjusted

by varying the mixt. proportion in the compn. A milk lotion contained 10% of a fatty base contg. monoglycerides 44.5, diglycerides 45.0, triglyceride 10.5%, and 1.5% polyoxyethylene-10-hexadecanol, 0.5% polyoxyethylene-20-hexadecanol, 7.0% sesame oil, 3.0% glycerol and 78.0% water. The lotion was stable after 10-12 mo at 20-30.degree..

L2 ANSWER 10 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1992:40118 Document No. 116:40118 Products containing crystallized fat containing 1,3-saturated-2-unsaturated triglyceride. Sugihara, Hiroshi; Hidaka, Hiroshi; Doi, Akira; Okawauchi, Toshitaka; Kawabata, Yasushi; Baba, Hideki (Fuji Oil Co., Ltd., Japan). Pat. Specif. (Aust.) AU 611744 B2 19910620, 27 pp. (English). CODEN: ALXXAP. APPLICATION: AU 1988-26852 19881214. PRIORITY: JP 1987-316731 19871214; JP 1988-115053 19880511.

AB Hard butter shortenings for use in chocolate manuf. are prepd. using butters rich in 1,3-satd., 2-unsatd. triglycerides (SUS triglycerides) contg. .gtoreq.50 C atoms in the fatty acid moieties. This leads to the formation of .beta.' crystals in the shortening. A com. SUS triglyceride hard butter 30 wt.% was mixed with hardened rapeseed oil 70 wt.% using nitrogen gas blowing. The X-ray diffraction pattern had a short lattice spacing of 4.6 .ANG.. This was added 2% to a molten chocolate mixt. that was released from molds after 15-20 min at 10.degree. to give a chocolate with good gloss. Similar results were found when **allanblackia** oil was used as a source of SUS triglycerides.

L2 ANSWER 11 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1987:552979 Document No. 107:152979 Comparison of three standard solvent extraction procedures for the determination of oil content in commercial oilseed samples. Kershaw, Stephen J.; Hackett, Franck (Agrifoodpharm Lab. Ltd., Univ. Liverpool, Liverpool, L69 3BX, UK). Journal of the Science of Food and Agriculture, 40(3), 233-44 (English) 1987. CODEN: JSFAAE. ISSN: 0022-5142.

AB Three std. extn. procedures (Federation of Oils, Seeds, and Fats Assocs., 1980; Int. Asscn. of Seed Crushers, 1963; Int. Org. for Standardization, ISO 659, 1979) for detg. oil content were compared for 15 oilseeds. Differences between results obtained with these procedures were not significant and repeatabilities were good. The general use of sand to aid microgrinding procedures and of an initial extn. period of 2 h only is recommended.

L2 ANSWER 12 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1986:502350 Document No. 105:102350 Cosmetic preparation to retard the ageing of skin. Courtin, Olivier (Clarins S. A., Fr.). Eur. Pat. Appl. EP 180505 A1 19860507, 13 pp. DESIGNATED STATES: R: CH, DE, GB, IT, LI. (French). CODEN: EPXXDW. APPLICATION: EP 1985-402002 19851015. PRIORITY: FR 1984-16038 19841019; FR 1985-2518 19850221.

AB The title compn. comprises the consecutive application of 2 prepn. The 1st prepn. is an aq. compn. contg. silanol mannuronate, bone marrow ext., silymarin, cattle spleen ext., Na pyrrolidonecarboxylate (PCANa), panthenol, mucopolysaccharides, plant amino acids, andt Echinacea ext. The 2nd prepn. is a fatty compn. contg. soybean, avocado, and butter-free unsaponifiables, walnut oil and **Pentadesma** butter.

L2 ANSWER 13 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1982:470995 Document No. 97:70995 Occurrence of aflatoxins in oilseeds providing cocoa-butter substitutes. Kershaw, Stephen J. (Huson and Hardwick, Liverpool, L3 6AA, UK). Applied and Environmental Microbiology, 43(5), 1210-12 (English) 1982. CODEN: AEMIDF. ISSN: 0099-2240.

AB Four oilseeds providing cocoa-butter substitutes (shea, pentadecima, illipe, and salseed), when tested as substrates for aflatoxin prodn. by 2 strains of *Aspergillus parasiticus*, gave varying levels of aflatoxin. Aflatoxins were found at low levels occurring naturally in moldy shea-nuts, but none of 21 com. shea-nut samples contained >20 .mu.g of aflatoxin B1 [1162-65-8]/kg.

- L2 ANSWER 14 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN  
 1977:532389 Document No. 87:132389 Fatty acid composition and characteristics of *Pentadesma* butyracea fat extracted from Ghana seeds. Adomako, Daniel (Cocoa Res. Inst., Tafo, Ghana). Journal of the Science of Food and Agriculture, 28(4), 384-6 (English) 1977. CODEN: JSFAAE. ISSN: 0022-5142.
- AB Dry tallow kernels of *P. butyracea*, shea butter kernels, and cocoa beans contained 50, 52.1, and 53.4% fat resp. Tallow fat and shea butter had similar slip no., saponification no., solidification point, and fatty acid compn., but tallow fat had a lower unsaponifiable matter content than shea butter; cocoa butter had a different m.p. and fatty acid compn. Cooling curves of 3:1, 1:1, and 1:3 mixts. of tallow fat and cocoa butter indicated poor compatibility between the two fats.
- L2 ANSWER 15 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN  
 1977:155536 Document No. 86:155536 Chemical investigation of Ceylonese plants. Part 21. Extractives of *Pentadesma* butyracea Sabine (Guttiferae). Gunasekera, Sarath P.; Sivapalan, Kanapathipillai; Sultanbawa, M. Uvais S.; Ollis, W. David (Dep. Chem., Univ. Sri Lanka, Peradeniya, Sri Lanka). Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1), 11-14 (English) 1977. CODEN: JCPRB4. ISSN: 0300-922X.
- AB The mol. structure of pentadesmaxanthone (I), isolated from the bark of *P. butyracea* together with .beta.-amyrin acetate (II), .beta.-amyrin, .beta.-sitosterol (III), and 1,3,5-trihydroxy-2-methoxyxanthone (IV), was detd. from chem. and spectral data. II, III, IV, jacareubin, osajaxanthone, and a tetraoxygenated xanthone were isolated from the timber of *P. butyracea*.
- L2 ANSWER 16 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN  
 1977:18717 Document No. 86:18717 The oil plants of Zaire. I. Botanical families giving oils of relatively low unsaturation. Ngiefu, C. Kabele; Paquot, C.; Vieux, A. (Fac. Sci., Univ. Natl. Zaire, Kinshasa, Zaire). Oleagineux, 31(7), 335-7 (French) 1976. CODEN: OLEAAF. ISSN: 0030-2082.
- AB The comps. of oils obtained from 23 plants of Zaire are described. Some of the plants, esp. *Irvingia gabonensis*, *Carapa guianensis*, *Allanblackia floribunda*, and *Terminalia catappa*, contained oils of possible industrial use.
- L2 ANSWER 17 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN  
 1971:416055 Document No. 75:16055 Extractives from Guttiferae. XIX. Isolation and structure of two benzophenones, six xanthenes, and two biflavonoids from the heartwood of *Allanblackia floribunda*. Locksley, Harry D.; Murray, Ian Gilbert (Dep. Chem. Appl. Chem., Univ. Salford, Salford/Lancashire, UK). Journal of the Chemical Society [Section] C: Organic (7), 1332-40 (English) 1971. CODEN: JSOOAX. ISSN: 0022-4952.
- AB Ten metabolites were isolated from the heartwood of *A. floribunda*: hydrocotoin (2-hydroxy-4,6-dimethoxybenzophenone), 2,3'-dihydroxy-4,6-dimethoxybenzophenone, 1,3,5-trihydroxyxanthone, 4',5'-dihydro-1,6,7-trihydroxy-4',4',5'-trimethylfurano[2',3':3,4]xanthone (I), volkensiflavone (II), morelloflavone (III), and, from methylation of the crude exts., 1,7-dimethoxyxanthone, 1-hydroxy-5-methoxyxanthone, 1-hydroxy-3,7-dimethoxy-2-(3,3-dimethylallyl)xanthone, and 1,3,6,7-tetramethoxyxanthone. (2,4,6-Trimethoxyphenyl)lithium (IV) treated with BzCl gave methylhydrocotoin (2,4,6-trimethoxybenzophenone) which was demethylated (BCl3CH2Cl2) to hydrocotoin. IV treated with m-methoxybenzoyl chloride gave 2,3'-4,6-tetramethoxybenzophenone.
- L2 ANSWER 18 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN  
 1966:476673 Document No. 65:76673 Original Reference No. 65:14345e-g Effects of some extracts of natural origin on the growth and development of plant tissues cultured in vitro. Kovoov, Aries (Univ. Paris). Ann.

Sci. Nat. Botan. Biol. Vegetal, 7(2), 215-352 (French) 1966.

- AB The effect was studied of the secretion of the flowers of *Spathodea campanulata*, exts. of stems of *Parthenocissus tricuspidata* and of the fruits of tomato, peach, pear, orange, and of *Artocarpus integrifolius*, *Anona muricata*, *Citrullus vulgaris*, *Mangifera indica*, *Carica papaya*, and *Averrhoa bilimbi*, and exts. of the seeds of *Passiflora edulis*, *Allanblackia floribunda*, *Borassus flabellifer*, *Elaeis guineensis*, and *Jubaea spectabilis* on the growth of tissue cultures of *Helianthus tuberosus*, *Parthenocissus tricuspidata*, *P. quinquefolia*, *Scorzonera hispanica*, and carrot. Auxins are widely distributed in the higher plants, and other substances capable of stimulating growth are also present. These other substances are kinins which require the presence of auxins to stimulate growth. Previously isolated kinins apparently are purines, and an active substance obtained from coconut milk also belongs to this group. Kinins from exts. of *Parthenocissus*, *Spathodea*, and orange, not obtained in as pure a form as the prepn. from coconut milk, also seem to be purines. The kinins probably serve as a source of nucleic acids for the cell. Auxin is required for the proliferation of normal tissues while tumorous tissue can grow without the addn. of either auxin or kinin.

L2 ANSWER 19 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1964:456196 Document No. 61:56196 Original Reference No. 61:9778h, 9779a-b A survey of eastern Nigerian plants for alkaloids, essential oils, and saponins. Seaforth, C. E. (Univ. Nigeria, Nsukka). W. African J. Biol. Appl. Chem., 7(3), 28-31 (Unavailable) 1963.

- AB Fresh plant leaves and stems, collected from various parts of eastern Nigeria, were chopped and tested for essential oils by covering 1 g. of the material with H<sub>2</sub>O in a test tube, boiling, and noting the odor. To test for saponins, 0.5 g. of the material was boiled 2 min. in 5 ml. H<sub>2</sub>O in a test tube, cooled, and shaken, and after 3 min., the amt. of frothing was noted; froth greater in height than the aq. layer was considered strongly pos. To test for alkaloids, 1 g. of material was dried at 60.degree., covered with 1% HCl or 2% citric acid, and let stand overnight. Four equal portions of the filtrate were treated with Mayer reagent, Wagner reagent, Hager reagent, and 2 g. NH<sub>4</sub> reineckate in 100 ml. H<sub>2</sub>O; a strong ppt. indicated an alkaloid. The following genera gave strong essential oil tests: *Synedrella*, *Agelaea*, *Diospyros*, *Ricinodendron*, *Allanblackia*, *Dalbergia*, *Tephrosia*, *Gossypium*, *Calypetrochilum*, *Piper*, *Canthium*, *Morinda*, *Allophylus*, and *Aframomum*. Strong saponin tests were given by *Enantia*, *Culcasia*, *Hippocratea*, *Aspilina*, *Eupatorium*, *Synedrella*, *Phyllanthus*, *Napoleona*, *Ostryoderris*, *Chlorophytum*, *Dracaena*, *Carapa*, *Olax*, *Barteria*, *Canthium Psychotria*, *Pachystela*, and *Clerodendrum*. Pos. alkaloid tests were given by *Enantia*, *Collichilia*, *Funtumia*, *Anchomanes*, *Culcasia*, *Toxocarpus*, *Ricinodendron*, *Lindackeria*, *Acacia*, *Baphia*, *Baphiastrum*, *Calliandra*, *Cassia*, *Lonchocarpus*, *Dracaena*, *Cissampelos*, *Olax*, *Parinari*, *Canthium*, *Mitracarpum*, and *Clerodendrum*.

L2 ANSWER 20 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1964:79069 Document No. 60:79069 Original Reference No. 60:13885c-f Paper chromatography of alkaloids with aqueous solutions of electrolytes. Resplandy, Albert Mem. Inst. Sci. Madagascar, Ser. B 10(1), 1-36 (Unavailable) 1961.

- AB The ascending technique was combined with some specific reagents. Results of 8 analyses had to be averaged to obtain R<sub>f</sub> values of acceptable accuracy. Variations in the amt. of alkaloid, the sample of paper within a homogeneous batch, or the extent of development or the temp. had no effect. The same chromatographic characteristics were obtained from the alkaloid bases and their salts, since the acid components always traveled sep. from the bases. With acidic electrolytes, a min. acid concn. was required based on the alkaloid. The R<sub>f</sub> values increased gradually with increasing acid concn. The accelerating action of the acids was apparent only when concns. varied by more than 1 g. equiv. With salt electrolytes, a min. salt concn. was required to produce normal chromatograms. R<sub>f</sub> values decreased with increasing salt concns., but this decrease was



apparent only for variations of the order of a g. equiv. Thus, Rf values could be varied widely by using acid and salt electrolytes in various combinations. The Rf values of alkaloids in acidic solns. was detd. mainly by pH. Cations had a retarding effect on Rf values, bivalent more pronounced than univalent. A change in electrolyte concn. caused a continuous variation of Rf. Each alkaloid could be identified by a plot of Rf as a function of electrolyte concn. Alkaloids of the same natural group had very close Rf values but never overlapped. Thus, a natural group of alkaloids could be characterized by a homogeneous family of curves. Graphs of Rf values of a natural group of alkaloids revealed the specific influence of functional groups on the basic structure of this group. Within a group, Rf was an inverse function of mol. wt.

L2 ANSWER 21 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1963:4087 Document No. 58:4087 Original Reference No. 58:686c-d The principle types of quantitative interrelationships for the fatty acids in vegetable oils. Goldovskii, A. M. Masloboino-Zhirovaya Promyshlennost, 28(No. 8), 10-15 (Unavailable) 1962. CODEN: MAZHA8. ISSN: 0368-8712.

AB The % distribution data for 292 varieties of seed oils plotted on the basis of their iodine and sapon. values together with the graphs showing the percentage of the individual fatty acids in sunflower, linseed, cottonseed, rape, nutmeg, and coconut oils, resp., and that of stearic (I), oleic (II), linoleic (III) and linolenic (IV) acids in mkanyi, peanut, sesame, cottonseed, sunflower, soybean, hempseed, and linseed oils are given. These oils are classified into 4 groups according to their I, II, III, and IV contents. 10 references.

L2 ANSWER 22 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1945:17558 Document No. 39:17558 Original Reference No. 39:2736f-g Configuration of naturally occurring mixed glycerides. I. The configuration of oleodistearin from various natural sources. Meara, M. L. Journal of the Chemical Society, Abstracts 22-3 (Unavailable) 1945. CODEN: JCSAAZ. ISSN: 0590-9791.

AB The transition and m.ps. of specimens of oleodistearin from seed fats of *Allanblackia floribunda*, *A. parviflora*, *A. stuhlmannii*, *Garcinia indica*, *Pentadesma butyracea*, and *Palaquium oblongifolium* lie very near to those given for synthetic .beta.-oleodistearin and that of form I differs markedly from that recorded for the .alpha.-isomer. This, taken in conjunction with the evidence available from oxidation of synthetic and naturally occurring .beta.-oleodistearin, makes it conclusive that the oleodistearins so far examd. occurring in the above seed fats consist entirely of the sym. .beta.-oleodistearin.

L2 ANSWER 23 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1942:4006 Document No. 36:4006 Original Reference No. 36:671i,672e-f The fat of *Pentadesma butyracea* Sab. Frahm, E. D. G. Ing. Nederland.-Indie, 8(No. 8, VII), 87-8 (Unavailable) 1941.

AB At 13% moisture the seeds contain 31.7% of fats; m. 36.5.degree., nD40 1.4583, sapon. no. 190, I no. (Wijs) 46.6 and diene no. 0.65. Analysis shows palmitic acid 7.3, stearic acid 38.5, oleic acid 47.5, linoleic acid 1.5, glycerol radical 4.3 and unsapond. 0.9%. These seeds are a good source of tech. stearic acid; most of the fat can be expressed by hydraulic pressure at 80.degree..

L2 ANSWER 24 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1940:14304 Document No. 34:14304 Original Reference No. 34:2194g-i Fatty acids and glycerides of the seed fats of *Allanblackia floribunda* and *Allanblackia parviflora*. Meara, M. L.; Zaky, Y. A. H. Journal of the Society of Chemical Industry, London, 59, 25-6 (Unavailable) 1940. CODEN: JSCIAN. ISSN: 0368-4075.

AB *Allanblackia floribunda* is a member of the Guttiferae family and occurs in Nigeria while *A. parviflora* also of the same family occurs in the Gold Coast. The component fat acids of the former have been found to be palmitic 3.2, stearic 56.8, arachidic 0.2, oleic 39.4 and linoleic 0.4%

(mol.); the component glycerides are chiefly oleodistearin approx. 76, with steardiolein 15.5 and about 5% of oleopalmitostearin. The component fat acids of *Allanblackia parviflora* were found to be myristic 1.8, palmitic 2.5, stearic 51.6, arachidic 0.2 and oleic 43.9% (mol.). In comparison the total amt. of C18 acids is almost the same, but with *A. parviflora* the larger amt. of oleic acid is accompanied by less stearic acid. This is further reflected in the major component glycerides which consist of approx. 60 oleodistearin, 26-9 steardiolein and 6-9% of oleopalmitostearin.

L2 ANSWER 25 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1936:65237 Document No. 30:65237 Original Reference No. 30:8666h-i Analyses of *Pentadesma* butyracea (tallow or butter tree) seed. Kandiah, S. Trop. Agr. (Ceylon), 87, 83-4 (Unavailable) 1936.

AB Air-dried seed from Ceylon (I) contained H<sub>2</sub>O 9.15 and fat 39.7% as compared with 10.6 and 40%, resp., in air-dried seed from Southern Nigeria (II). The values for the oil of I detd. at 45.degree. and of II at 15.5.degree. were, resp.: d. 0.9128, 0.857; acid no. 2.8, 3.1; sapon. no. 187.9, 186; and I no. (Wijs) 44.3, 46.5. I had n<sub>35</sub> 1.4639. The oil is extd. by hot expression or by chem. solvents and must be refined for use in soaps.

L2 ANSWER 26 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1935:58689 Document No. 29:58689 Original Reference No. 29:7681g-i,7682a-c Chemical study of some oil-bearing plants of the Belgian Congo. Adriaens, L. Matieres Grasses, 27, 10370-1 (Unavailable) 1935. CODEN: MGRAAN. ISSN: 0368-9999.

AB *Pentadesma* butyracea Sabine from Tshuapa and from Kisantu, resp., had the following compn. on the dry basis: total ash 1.91, 1.36; crude protein (N .times. 6.25) 4.80, 5.69; fat (pert. ether ext.) 42.80, 36.90; crude fiber 7.53, 13.17; pentosans 1.61, 1.83%. The fats extd. from the 2 above samples, and a fat prepd. by the natives of Moma had the following characteristics, resp.: m. p. 28-31.5.degree., 28-32.degree., 27.5-31.degree.; d<sub>15</sub> 0.9145, 0.9137, 0.9144; n<sub>37</sub> 1.4532, 1.4517, 1.4562; acid no. 4.04, 9.85, 13.84; acidity as oleic acid 2.02, 4.93, 6.92%; sapon. no. 192.75, 190.0, 196.1; ester no. 188.71, 180.15, 182.26; I no. (Wijs) 35.60, 36.77, 32.76; Ac no. (Andr.acte.e, xylene) 0.65, 0.82, 0.10%; unsaponifiable matter 11.78, 24.85, 12.54%; H<sub>2</sub>O-insol. fat acids 94.0, 93.40%, -. Characteristics of the mixed fat acids: m. p. 48-49.7.degree., 47.8-49.2.degree., -; solidifying point 46.2-44.degree., 46.5-44.8.degree., -; sapon. no. 201.4, 200.2, -; I no. (Wijs) 36.7, 37.8, -; unsatd. acids (oleic) 57.8, 57.4, 55.1%; satd. acids (stearic and palmitic) 42.4, 42.6, 44.9%. A sample of *P. lebrunii* St. contained 20.3% fat, 4.82% ash and 6.48% protein. The fat had the following characteristics: d<sub>15</sub> 0.9155, acid no. 5.85, sapon. no. 218.82, unsaponifiable matter 0.97%, satd. acids 46.6%, unsatd. acids 53.4%, m. p. of the solid acids 56.degree., I no. (Wijs) of the liquid acids 87.7. Seeds of *Omphalocarpum boyankombo* De Wild., harvested at Lake Leopold II in 1930, consisted of 66% tegument and 34% kernel, which had the following compn. on the dry basis: total ash 3.54, total N 2.07, crude protein 12.94, fat (light petr. ether ext.) 48.80, crude fiber 6.62, pentosans 3.17, substances hydrolyzable by 3% H<sub>2</sub>SO<sub>4</sub> 20.00%. Characteristics of the fat: d<sub>21.5</sub> 0.9148, d<sub>15</sub> 0.9128, n<sub>22.5</sub> 1.4672, acid no. 1.21, acidity as oleic acid 0.61%, sapon. no. 206.06, ester no. 204.85, I no. (Wijs) 81.70, Ac no. (Andr.acte.e, xylene) 15.46, sapon. no. of acetylated oil 209.30, Hehner no. 93.0, unsaponifiable matter 1.17%. Characteristics of the mixed fat acids: m. p. 32-4.degree., solidifying point 31.5-29.degree., titer test 32.1.degree., sapon. no. 208.4, I no. (Wijs) 84.8, satd. acids (stearic and palmitic) 20.6%, unsatd. liquid acids (chiefly oleic) 79.4%. Oil from the seed of *Autranella congolensis* (De Wild.) A. Chev., from Lisala, had the following characteristics: d<sub>33</sub> 0.9104, n<sub>24</sub> 1.4662, acid no. 1.94, acidity as oleic 0.97%, sapon. no. 190.40, ester no. 188.46, I no. (Wijs) 74.27, Ac no. (Andr.acte.e, xylene) 14.46, Hehner no. 94.10, unsaponifiable matter 0.85%. Characteristics of

the mixed fat acids: m. p. 32.3-33.5.degree., solidifying point 31.7-30.5.degree., sapon. no. 197.50, I no. (Wijs) 76.21, satd. acids (stearic and palmitic, the latter predominating) 22%, unsatd. acids (chiefly oleic) 78%.

L2 ANSWER 27 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1935:58688 Document No. 29:58688 Original Reference No. 29:7681g-i,7682a-c Chemical study of some oil-bearing plants of the Belgian Congo. Adriaens, L. Matieres Grasses, 26, 10321-3,10343-4 (Unavailable) 1934. CODEN: MGRAAN. ISSN: 0368-9999.

AB **Pentadesma** butyracea Sabine from Tshuapa and from Kisantu, resp., had the following compn. on the dry basis: total ash 1.91, 1.36; crude protein (N .times. 6.25) 4.80, 5.69; fat (pert. ether ext.) 42.80, 36.90; crude fiber 7.53, 13.17; pentosans 1.61, 1.83%. The fats extd. from the 2 above samples, and a fat prepd. by the natives of Moma had the following characteristics, resp.: m. p. 28-31.5.degree., 28-32.degree., 27.5-31.degree.; d15 0.9145, 0.9137, 0.9144; n37 1.4532, 1.4517, 1.4562; acid no. 4.04, 9.85, 13.84; acidity as oleic acid 2.02, 4.93, 6.92%; sapon. no. 192.75, 190.0, 196.1; ester no. 188.71, 180.15, 182.26; I no. (Wijs) 35.60, 36.77, 32.76; Ac no. (Andr.acte.e, xylene) 0.65, 0.82, 0.10%; unsaponifiable matter 11.78, 24.85, 12.54%; H2O-insol. fat acids 94.0, 93.40%, -. Characteristics of the mixed fat acids: m. p. 48-49.7.degree., 47.8-49.2.degree., -; solidifying point 46.2-44.degree., 46.5-44.8.degree., -; sapon. no. 201.4, 200.2, -; I no. (Wijs) 36.7, 37.8, -; unsatd. acids (oleic) 57.8, 57.4, 55.1%; satd. acids (stearic and palmitic) 42.4, 42.6, 44.9%. A sample of *P. lebrunii* St. contained 20.3% fat, 4.82% ash and 6.48% protein. The fat had the following characteristics: d15 0.9155, acid no. 5.85, sapon. no. 218.82, unsaponifiable matter 0.97%, satd. acids 46.6%, unsatd. acids 53.4%, m. p. of the solid acids 56.degree., I no. (Wijs) of the liquid acids 87.7. Seeds of *Omphalocarpum boyankombo* De Wild., harvested at Lake Leopold II in 1930, consisted of 66% tegument and 34% kernel, which had the following compn. on the dry basis: total ash 3.54, total N 2.07, crude protein 12.94, fat (light petr. ether ext.) 48.80, crude fiber 6.62, pentosans 3.17, substances hydrolyzable by 3% H2SO4 20.00%. Characteristics of the fat: d21.5 0.9148, d15 0.9128, n22.5 1.4672, acid no. 1.21, acidity as oleic acid 0.61%, sapon. no. 206.06, ester no. 204.85, I no. (Wijs) 81.70, Ac no. (Andr.acte.e, xylene) 15.46, sapon. no. of acetylated oil 209.30, Hehner no. 93.0, unsaponifiable matter 1.17%. Characteristics of the mixed fat acids: m. p. 32-4.degree., solidifying point 31.5-29.degree., titer test 32.1.degree., sapon. no. 208.4, I no. (Wijs) 84.8, satd. acids (stearic and palmitic) 20.6%, unsatd. liquid acids (chiefly oleic) 79.4%. Oil from the seed of *Autranella congolensis* (De Wild.) A. Chev., from Lisala, had the following characteristics: d33 0.9104, n24 1.4662, acid no. 1.94, acidity as oleic 0.97%, sapon. no. 190.40, ester no. 188.46, I no. (Wijs) 74.27, Ac no. (Andr.acte.e, xylene) 14.46, Hehner no. 94.10, unsaponifiable matter 0.85%. Characteristics of the mixed fat acids: m. p. 32.3-33.5.degree., solidifying point 31.7-30.5.degree., sapon. no. 197.50, I no. (Wijs) 76.21, satd. acids (stearic and palmitic, the latter predominating) 22%, unsatd. acids (chiefly oleic) 78%.

L2 ANSWER 28 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1934:32937 Document No. 28:32937 Original Reference No. 28:3925b-f Chemical study of the seed of **Allanblackia** Klainei Pierre (from the Belgian Congo). Adriaens, L. Matieres Grasses, 25, 9931-2,9961-2 (Unavailable) 1933. CODEN: MGRAAN. ISSN: 0368-9999.

AB cf. C. A. 24, 253-4. Compn. of the spermoderm (on the dry basis) : total ash 0.75, H2O-sol. ash 0.51, H2O-insol. ash 0.24, alky. of total ash (as K2CO3) 37.00, alky. of H2O-sol. ash (as K2CO3) 54.62, total N 0.58, proteins (N .times. 6.25) 3.67, petr. ether ext. 1.07, Et2O ext. 5.20, CHCl3 ext. 1.80, crude fiber (Weende) 39.70, pentosans 12.60, substances hydrolyzable by 3% H2SO4 15.80%. It contains no urease, but an emulsin which acts very rapidly on the amygdaloside with liberation of HCN. The

ash consists mainly of K<sub>2</sub>O, MgO, P<sub>2</sub>O<sub>5</sub>, CaO, together with small quantities of SO<sub>3</sub>, Na<sub>2</sub>O, Fe and Cl. Compn. of the kernel (on the dry basis): total ash 1.62, H<sub>2</sub>O-sol. ash 0.78, H<sub>2</sub>O-insol. ash 0.84, alky. of total ash (as K<sub>2</sub>CO<sub>3</sub>) 30.84, alky. of H<sub>2</sub>O-sol. ash (as K<sub>2</sub>CO<sub>3</sub>) 64.00, total N 0.66, proteins (N .times. 6.25) 4.13, fat (low-boiling petr. ether ext.) 71.20, crude fiber (Weende) 3.29, pentosans 1.02, reducing sugars (as glucose) 2.36, sugars hydrolyzable by invertase (as glucose) 0.09, sugars hydrolyzable by emulsin (as glucose) nil, substances hydrolyzable by 3% H<sub>2</sub>SO<sub>4</sub> 2.29%. The fat-free kernel contains no urease nor starch but contains an emulsin which hydrolyzes the amygdaloside with liberation of HCN. The ash consists largely of K<sub>2</sub>O, P<sub>2</sub>O<sub>5</sub>, MgO and CaO, together with small quantities of SO<sub>3</sub>, Cl, Fe<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub> and Na<sub>2</sub>O. Characteristics of the fat: d<sub>45</sub> 0.9000, d<sub>15</sub> (Allen) 0.9192, m. p. 42.degree., acid value 1.06, acidity (as oleic) 0.53%, sapon. no. 186.55, ester value 185.49, I no. (Wijs) 36.46, n<sub>57</sub> 1.4490, unsaponifiable 0.56%, Ac no. (Andr.acte.e) 2.25, sapon. no. of the acetylated oil 194.76. Characteristics and compn. of the mixed acids: m. p. 60.2-62.8.degree., titer 61.3.degree., neutralization no. 182.40, sapon. no. 192.40, I no. (Wijs) 39.60, solid acids 62.5%, liquid acids 37.5%. The solid acids consist mostly (probably entirely) of stearic acid, and the liquid acids of oleic acid; the fat consists essentially of oleodistearin.

L2 ANSWER 29 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1932:13531 Document No. 26:13531 Original Reference No. 26:1462i,1463a  
Fatty acids and glycerides of solid seed fats. 1. Composition of the seed fats of **Allanblackia stuhlmannii**, **Pentadesma** butyracea, **Butyrospermum parkii** (Shea) and **Vateria indica** (Dhupa).  
Hilditch, T. P.; Saletore, S. A. Journal of the Society of Chemical Industry, London, 50, 468-72T (Unavailable) 1931. CODEN: JSCIAN. ISSN: 0368-4075.

AB The percentage compn. of the seed fat of **Allanblackia stuhlmannii** was found to be: palmitic acid 3, stearic 53 and oleic 44. The percentage compn. of **Pentadesma butyracea** was found to be: palmitic acid 5.5, stearic 46 and oleic 48.5. The bulk of the fat is probably a mixt. of equal amts. of monooleo disatd. and dioleo monosatd. glycerides. The seed fat of **Butyrospermum Parkii** (Shea) has the following percentages of component fatty acids: palmitic 8.5, stearic 36, oleic 50.0 and linoleic 5.5. The seed fat of **Vateria indica** has the following percentages of fatty acids: palmitic 10, stearic 39, arachidic 3 and oleic 48.

L2 ANSWER 30 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1932:2784 Document No. 26:2784 Original Reference No. 26:327d-e Oleiferous **Allanblackia**. Chemical composition of **Allanblackia floribunda** Oliv. Pieraerts, J.; Vlassov, serge Matieres Grasses, 22, 8976-7 (Unavailable) 1930. CODEN: MGRAAN. ISSN: 0368-9999.

AB Addnl. analyses have been made supporting the previous conclusions that this plant is the cheapest and most satisfactory source of pure or technical stearic acid.

L2 ANSWER 31 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1931:39252 Document No. 25:39252 Original Reference No. 25:4424i,4425a-f  
New investigations of the oil seeds of the tropical countries.  
Margaillan, L. Ann. musee colonial Marseille, 7(No. 3), 5-32 From: Chem. Zentr. 1930 I, 3621-3 (Unavailable) 1929.

AB Ouricuri nuts (*Cocus coronata*, Brazil) contain 65.5% of a solid white fat, m. 25.degree.. It is edible and gives a good soap. Sapon. no. 260, I no. 13.6. N'soulton (*Ochoca Gaboni*) contains 59% of a black fat which becomes light pink on powdering, n<sub>D</sub>60 1.444, sapon. no. 237, I no. 0, Reichert no. 2.2, titer 45.5.degree., mol. wt. 227. It contains perhaps isomyristic acid and could be used as a substitute for cacao butter. Kizalahy (*Symphonia laevis*, Madagascar) contains 33.2% of a yellowish fat, m. 20.degree., d<sub>30</sub> 0.9105, n<sub>D</sub>45 1.4591, sapon. no. 195, acid no. 12.8, I no. 63.2, unsaponifiable matter 0.8%, titer 43.degree.. Kizavary (*Symphonia*

Louveli) contains 46.1% fat, m. 26-8.degree., d30 0.9065, nD45 1.4592, sapon. no. 197, acid no. 12, I no. 61.3, Hohner no. 94.2, unsaponifiable matter 0.43%, titer 42.8.degree.. Gay Doc (*Garcinia tonkinensis*) contains 30.8% of a brownish red fat. Consts. of the fat extd. with petroleum ether and trichloroethylene, resp., are d22 0.9408, 0.9406; nD50 1.4775, 1.4709; sapon. no. 197.5, 190; acid no. 11.5, 2.3; I no. 64, 83; Ac number 44, 44; resins 11%, 7%; unsaponifiable matter 3.2%, 3%. Petr. ether dissolves only two thirds of the fat. The extn. residue is very bitter. Bouandja (*Allanblackia floribunda*) contains 65.5% of a white fat, m. 41.degree., nD60 1.4502, sapon. no. 192, I no. 40.2, titer 62.6.degree.. *Allanblackia kisonghi* contains 46.1%, fat, m. 41.degree., nD60 1.4503, I no. 37, sapon. no. 204. The seeds of Trau (*Aleuritis montana*) from Tonkin consist of 37% skin and 63% kernel. The latter contains 59.4% of a yellow oil (extd. with low-boiling petr. ether), nD30 1.5116, dispersion 0.0324. After some time the oil solidifies, m. 45.degree.. At higher temps. and under the influence of light the fat polymerizes. The gelatinous polymerization product is insol. in fat solvents and is attacked by alkali. The same change occurs in old seeds, as is shown by the changing consts. Seeds of *Moringa hildebrandti* Engl., and *Moringa droubardi* Jum., resp., contain fat 48.7%, 44%, of d20 0.901, 0.908; nD20 1.4650, 1.4669; acid no. 18, 1.4; I no. 69, 68. Otsagui (*Erismadelphus Bandoni*) contains 47.5% of an oil, which solidifies partly at 10.degree., d20 0.9163, nD48 1.4586, sapon. no. 193, acid no. 11.6, I no. 67.5. N'djengue (*Ouassia gabonensis*) contains 45.5% of a buttery fat, m. 50.degree., nD 1.4549, sapon. no. 192.2, I no. 59, Reichert-Meissl no. 2.1, titer 52.5.degree.. It turns rancid very soon; the soap gives a good lather. *Nimonia americana* (Monpegue) contains 62.7% of a red oil, d25 0.9195, nD25 1.4725, sapon. no. 171, acid no. 24.6, I no. 93.4, Ac no. 19, unsaponifiable matter 1.5%. *Poga oleosa* (Mpoga) from the Congo contains 69.2% oil, nD25 1.4678, viscosity at 20.degree. 0.73, sapon. no. 193, acid no. 3.4, I no. 88; fatty acids titer 25.2.degree., mol. wt. 285, I no. 93, liquid acids 86.2% of I no. 96. *Pongamia glabra* (Karanja) contains 40% of an oil of disagreeable odor, m. about 10.degree., I no. 72. *Licania rigida* (Oiticica) from Guayana contains 60% of a dark, unctuous oil, m. 50.degree.. It becomes light and elastic on standing; nD50 1.517, dispersion very high, I no. 140. Spanish peppermint seeds (*Capsicum annum*) contain 14.9% of a rapidly drying oil, nD20 1.4832 (1.4780), sapon. no. 195, I no. 144. *Baillonella obovata* (Moyabi) from Central Africa contains 51.5% of a light yellow oil, which crystallizes at 25.degree., nD45 1.4521, sapon. no. 192, acid no. 35, I no. 62, Reichert-Meissl no. 2.1, Ac no. 25, unsaponifiable matter 2.1%. *Autranella congolensis* contains 0.94% of a half-solid fat, I no. 65.4. *Imbricaria coriacea* (Nato) contains 9.7% of an oil, liquid at 20.degree., sapon. no. 177, I no. 73, acid no. 14.

- L2 ANSWER 32 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN  
 1931:36889 Document No. 25:36889 Original Reference No. 25:4140i,4141a-d  
 Oleaginous seeds from the forests of Angola. de Mello Geraldles, C.;  
 d'Almeida, A.; Duarte, C. Bull. mat. grasses inst. colonial Marseille,  
 No. 14, 332-42 (Unavailable) 1930.
- AB The ether-extd. oils from the seeds of the following species have been  
 examd. *Allanblackia floribunda* Oliv., "Lalanjo": dark reddish  
 brown ovoid three-sided seeds, av. wt. 2.39 g., yielding a whitish  
 odorless fat, m. 40.7.degree., f. 39.5-40.5.degree., titer 58-60.degree..  
*A. saculeuxii* Nua., "M'bunze": bright red-brown seeds irregularly  
 three-sided, av. wt. 8.6 g., yielding a yellowish white fat, m.  
 41.8-42.8.degree., f. 41-42.degree., titer 59-61.degree. (cf. Jumelle,  
 "Les Huiles v. acte. eg. acte. etales," 1921, p. 227). *Iringia robur*  
 Mildbr., "Cuma": the fibrous drupe (av. wt. 84 g.) contains only 6.75% of  
 kernel surrounded by a very stony endocarp and is valueless as a com.  
 source of oil. *Balanites mayumbensis* Exell., "Buza pundi": the fleshy  
 drupe yields ovoid stones, av. wt. 35.9 g., contg. 48.16% of dark-fleshed  
 kernel. The brownish acid oil obtained had an unpleasant odor and taste.  
 Comparative figures for other *Balanites* species are quoted. (The name of

a species examined previously [J. d'agric. tropicale, 1912, No. 134, 233] and erroneously recorded as *Trachylobium mo. cdll. cambicensis* is corrected to *B. maughamii*.) *Strombosia scheffleri* Engl., "M'senha": the ovoid stones (wt. 4-12 g.) from the drupes (av. wt. 10.3 g.) yield 62.5% of kernel, from which is obtained a yellow-brown clear oil of unpleasant odor and taste. *Mimusops ebolowensis* Engl. and Krause, "Muabi": the piriform seeds (av. wt. 19 g.) contain 15.17% of kernel contg. 4.75% of fat and 14.32% of moisture. The seeds (s) and kernels (k) of these 6 species contained, resp. (%): moisture 3.44 (s), 2.51 (s), 7.2 (k), 9.15 (k), 13.74 (k), -; oil (on dry basis) 59.96 (s), 62.64 (s), 64.85 (k), 39.37 (k), 18.06 (k), -. The oils had, resp.: d15 0.89484, 0.91869, 0.9194, -, 0.91715, 0.9353; nD 1.4529 at 50.degree., 1.4551 at 50.degree., -, 1.4602 at 50.degree., 1.4716-1.4742 at 25.degree., -; sapon. value 184-95, 207.85, -, 204.61, 216.2, -; I value 33-6, 29.5, -, 101, 83.6, -; acid value 3.6-7.5, 35.3, -, 71.12, 39.1-98.6, -. The kernels of *Strombosia gossweileri* S. Moore and of *Strombosiaopsis congolensis* De Wild and Durand contained, resp., moisture 11.7, 11.7%, oil 3.04, 2.2%. The kernels of an unknown species of N. O. Sapotaceae contained 70% of fat.

L2 ANSWER 33 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1931:23258 Document No. 25:23258 Original Reference No. 25:2583g-h  
Oleiferous **Allanblackia**. Chemical composition of  
**Allanblackia** floribunda Oliv. Pieraerts, J.; Vlassov, Serge  
Matières Grasses, 22, 8975-7 (Unavailable) 1930. CODEN: MGRAAN. ISSN:  
0368-9999.

AB Addnl. analysis has been made supporting previous conclusions that this plant is the cheapest and most satisfactory raw material for the manuf. of pure or technical stearic acid.

L2 ANSWER 34 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1930:13911 Document No. 24:13911 Original Reference No. 24:1533a-b  
**Allanblackia** stuhimannii seeds from Tanganyika Territory. Anon.  
Bull, Imp. Inst., 27, 455-7 (Unavailable) 1929.

AB The kernels contained 5.9% H2O and 66.5% (70.7% on dry basis) of white, firm, somewhat brittle fat, of high m. p., which had const. agreeing with those published by other observers, and closely resembling the fat from Gold Coast Kisidwe nuts. The residual meal contained no alkaloids or cyanogenetic glucosides, but a small quantity of tannin was present; its compn. was: H2O 13.9, crude proteins 14.9, fat 1.4, N-free ext. 58.6, crude fiber 7.7, ash 3.5%, nutrient ratio 1:4.2, food units 99.4.

L2 ANSWER 35 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1930:1965 Document No. 24:1965 Original Reference No. 24:253i,254a-c  
Oleiferous **Allanblackia**. Preparation of pure stearic acid.  
Pieraerts, J.; Adriaens, L. Matières Grasses, 21, 8510-4,8539-41  
(Unavailable) 1929. CODEN: MGRAAN. ISSN: 0368-9999.

AB Seeds of **Allanblackia** flboriunda var. Kisonghi contained 3.56% H2O on the dry basis, total ash 1.79 (H2O insol. ash 0.68, H2O sol. ash 1.11), total N 0.58, nitrogenous matter (N .times. 6.25) 3.63, fatty matter 60.16, pentosans 0.31, cellulose 4.39, ash alky. as K2CO3, on total ash 40.02, on H2O sol. ash 64.54%. After complete extn. with petroleum ether the oil cake contains 1.5% total N, 9.38% nitrogenous matter, 2.78% reducing sugars, 0.85% pentosans, 11.65% cellulose, 0.55% P2O5, carbohydrates other than sugars (hydrolyzed in 3% H2SO4) 8.13%; d100100 of fats 0.8917 or at 15.degree. (Allen factor) 0.9461, m. p. 38.5-40.degree., solidification point 37-36.degree., acid no. 22.9, acid as oleic acid 11.45%, sapon, no. 197.9, ester no. 174, I no. 42.33, Crismer no. 71.5, nD66 1.4471, unsaponifiable 1.60%, Hohner no. 95.84%, sapon. no. of acetylated oil 212.8, acetyl no. 19.98, Beaudoin test negative, Halphen test negative, Milliau-Becchi test positive, calcd. glycerol 18.81%, obtained 10.12%, mixed fatty acids m. 58.5-59.5.degree., solidification point 58-56.5.degree., neutralization no. 201.6, sapon. no. 204.7, I no. 47.99, nD65 1.4397. Sepn. of liquid from solid acids gave by the Pb salt-Et2O method 54.5% solid and 45.5% liquid acids; by the TL2SO4 method

52.4% solid and 47.6% liquid acids; by the (AcO)2Mg method 52% solid and 48% liquid acids. P. and A. use this method. To obtain pure stearic acid 20 g. of dried material was ground, 25 cc. of 70% EtOH gradually added and the whole ground to a smooth paste; this was filtered on a Buchner funnel with a hardened paper wetted with EtOH, under a low vacuum. The vacuum was then increased slightly and the cake washed 6 times with 7.5 cc. of 70% EtOH, dried on the filter as much as possible and then in vacuo for 2-3 days.

L2 ANSWER 36 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1929:3497 Document No. 23:3497 Original Reference No. 23:475e Seeds of **Pentadesma** butyraceum. Rosenthaler, L. (Univ. Bern.). Pharmazeutische Zeitung, 73, 1307 (Unavailable) 1928. CODEN: PHZIAP. ISSN: 0031-7136.

AB These seeds, not infrequently used to adulterate Semen Colae, are reported in certain quarters to contain caffeine, in others to be caffeine-free. It is now shown that they contain no caffeine.

L2 ANSWER 37 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1923:10933 Document No. 17:10933 Original Reference No. 17:1897i,1898a A new oil seed from the Gold Coast. Anon. Bulletin of the Imperial Institute, London, 20, 463-5 (Unavailable) 1922. CODEN: BUIIAD. ISSN: 0366-4279.

AB Kisidwe nuts (**Allanblackia** sp., probably *A. floribunda* (Nat. Ord Guttiferae) consist of shell 38.4%, kernel 61.6%. The latter contained 1.9% H2O, and on extrn. with light petroleum ether yielded 71.8% (72.3% on dry basis, and 44.2% on nuts as received) of hard white fat with a faint odor, which showed: d15100 0.8563, n40, 1.458, m. (open-tube method) 38.6.degree., solidifying point of fatty acids 57.6.degree., acid value 1.0, sapon. value 190.8, I value 44.2%, unsapon. matter 0.4%, volatile acids (cc. 0.1 N alkali required to neutralize acids from 5 g. of oil) sol. 0.11, insol. 0.10. These consts. agree with those recorded for the fat of *A. stuhlmannii*, Engl. The residual meal contained (calcd. to 7% fat): H2O 9.3, crude proteins 16.4, fat 7.0, carbohydrates (by difference) 52.2, crude fiber 8.9, ash 6.2%, nutrient ratio 1:4.2, food units 111. It contained no alkaloids or cyanogenetic glucosides, but a small amt. of tannin was present.

L2 ANSWER 38 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1920:7850 Document No. 14:7850 Original Reference No. 14:1454b-c New oil seeds from Sierra Leone. Dunstan, W. R. Experiment Station Record [U. S. Department of Agriculture], 39, 802 (Unavailable) 1918. CODEN: EXSRA8. ISSN: 0097-689X.

AB Descriptions and analyses are gives of several new or little known oil seeds and oils from Sierra Leone, including the kernels of **Pentadesma** butyracea, piassava nut oil, and "Po-yoak" nuts and oil.

L2 ANSWER 39 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1920:7849 Document No. 14:7849 Original Reference No. 14:1454b-c New oil seeds from Sierra Leone. Dunstan, W. R. Bulletin of the Imperial Institute, London, 16, 35-40 (Unavailable) 1918. CODEN: BUIIAD. ISSN: 0366-4279.

AB Descriptions and analyses are gives of several new or little known oil seeds and oils from Sierra Leone, including the kernels of **Pentadesma** butyracea, piassava nut oil, and "Po-yoak" nuts and oil.

L2 ANSWER 40 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1918:14460 Document No. 12:14460 Original Reference No. 12:2452c-f New oil seeds from Sierra Leone. Anon. Bulletin of the Imperial Institute, London, 16, 35-40 (Unavailable) 1918. CODEN: BUIIAD. ISSN: 0366-4279.

AB An account is given of several new or little known oil seeds and oils from Sierra Leone. **Pentadesma** butyracea, known as butter or tallow

tree, yields a kernel which, when dried so as to contain 12.4% moisture, gives 36.6% of pale yellow fat of rather soft consistency and with a slight odor. This is equiv. to 41.8% from the dry kernel. This fat had  $d_{15} 0.8565$ , m. p.  $33^{\circ}$ , acid value 17.4, sapon. value 191.7, I value 42.8%. The residual meal cannot be used for feeding purposes and because of the small amt. of N present is not valuable as a fertilizer. A sample of piassaver oil, presumably obtained from a species of *Raphia* was of a dark orange-red color and contained a fair proportion of sepd. stearin. It resembled palm oil in odor but was darker and more liquid. This oil had:  $d_{15} 0.919$ , solidifying p. of fatty acids  $41^{\circ}$ , acid value 6.2, sapon. value 192.7, I value 79.5%, Hehner value 94.7, insol. fatty acids 92.6%, unsapon. matter 2.1%. These consts. compare very closely with those of palm oil. A sample of Po-Yoak oil, which contained a considerable deposit of stearin and possessed an odor-like tung oil, was examd. with the following result:  $d_{15} 0.963$ , solidifying p. of fatty acids  $31^{\circ}$ , acid value 2.6, sapon. value 189, I value 157%, unsapon. matter 0.84%. The high I value indicates that this oil (probably from a species of *Parinarium*) is a drying oil and it was found to form a non-transparent film when exposed to air and light. Like linseed oil, it became thick when heated at  $280^{\circ}$  for longer than 10 min. Its utilization as a drying oil for use in paints and varnishes is being studied.

L2 ANSWER 41 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1917:15570 Document No. 11:15570 Original Reference No. 11:3122a-d  
Refraction constants of various vegetable fats and oils. Heim, F. Bull. Agr. Intelligence, 7, 1529-32 (Unavailable) 1916.

AB The detn. of  $n$  yields a reliable means of estg. the purity of any fat or oil. Thus Tsujimoto found  $n$  for oil of *Thea sinensis* to be 1.4707 and 1.4706 was found in the present investigations. Other consts. show greater variation, especially those resulting from chem. tests. Except in the case of *Ricinodendron africanus*  $n$  always varied with the I no. As a rule  $n$  increases as the sapon. no. decreases. Exceptions to this rule were the oil of "I Sano" and the fat of *Ricinodendron africanus*. No relationship could be traced between  $n$  and acid no., R.-M. no. and Hehner no. With regard to the influence of the chem. compn. on  $n$  it is obvious that the value of the latter must be dependent on the constitution of the fat. If a fat or oil be a true mixt. and the optical characters of each of its constituents be known it should be possible to calc. either its  $n$  from a quant. chem. analysis or vice versa. But up to the present no values of  $n$  beyond those of stearic, palmitic and oleic acids have been detd. and the indices of all the glycerides have still to be investigated. Under these conditions it is difficult to say whether fats and oils consist of true mixts. and whether it will ever be possible to check exptl. results by calcg. values. The only example now available is the fat of **Pentadesma** butyracea which consists of 90% stearic and palmitic acids with 10% of oleic acid. The calcd.  $n$  is 0.512 at  $79^{\circ}$ ; detns. gave 0.530.

L2 ANSWER 42 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1917:15569 Document No. 11:15569 Original Reference No. 11:3122a-d  
Refraction constants of various vegetable fats and oils. Heim, F. Bull. office colonial, 9, 267-76 (Unavailable) 1916.

AB The detn. of  $n$  yields a reliable means of estg. the purity of any fat or oil. Thus Tsujimoto found  $n$  for oil of *Thea sinensis* to be 1.4707 and 1.4706 was found in the present investigations. Other consts. show greater variation, especially those resulting from chem. tests. Except in the case of *Ricinodendron africanus*  $n$  always varied with the I no. As a rule  $n$  increases as the sapon. no. decreases. Exceptions to this rule were the oil of "I Sano" and the fat of *Ricinodendron africanus*. No relationship could be traced between  $n$  and acid no., R.-M. no. and Hehner no. With regard to the influence of the chem. compn. on  $n$  it is obvious that the value of the latter must be dependent on the constitution of the fat. If a fat or oil be a true mixt. and the optical characters of each



of its constituents be known it should be possible to calc. either its n from a quant. chem. analysis or vice versa. But up to the present no values of n beyond those of stearic, palmitic and oleic acids have been detd. and the indices of all the glycerides have still to be investigated. Under these conditions it is difficult to say whether fats and oils consist of true mixts. and whether it will ever be possible to check exptl. results by calcg. values. The only example now available is the fat of *Pentadesma* butyracea which consists of 90% stearic and palmitic acids with 10% of oleic acid. The calcd. n is 0.512 at 79.degree.; detns. gave 0.530.

L2 ANSWER 43 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1915:6446 Document No. 9:6446 Original Reference No. 9:974d-g Examination of oil fruits and seeds of our (German) colonies. III. *Pentadesma* kerstingii. Wagner, H.; Muesmann, J.; Lampart, J. B. Zeitschrift fuer Untersuchung der Nahrungs- und Genussmittel sowie der Gebrauchsgegenstaende, 28, 244-9 (Unavailable) 1914. CODEN: ZNGEA2. ISSN: 0372-9419.

AB The seeds examd. were 2-2.5 cm. long and 1.7-2.2 cm. wide, the av. wt being 8.4 g. They contained H2O 14.2, ash 2.19, P2O5 0.22, crude fiber 11.88, protein 3.88 and ether ext. 41.5%. The constns. of the fat were: Refractometer reading (40.degree.) 45-46, m. p. 38-39.degree., solidn, p. 29.2.degree., acid no. 12.4, R.-M. no. 0.22, Polenske no. 0.40, sapon. no. 192, I no. (H.hivin.ubl) 45.9. The Baudouin, Soltsien and Halphen reactions were negative; Bellier's test after 5 sec. gave a blue-violet color, passing into wine-red. The fatty acids showed a m. p. 57.5.degree., solidn. p. 51.5.degree., refractometer reading (60.degree.) 24.1, neutralization value 195.4, mean mol. wt. 287-1 and I no. 46.8. Only stearic acid could be detected in the solid fatty acids, the liquid acids having a refractometer reading (40.degree.) 38.0 and an I no. (H.hivin.ubl) 87.3. The unsaponifiable matter was 0.6% which after purification melted at 145-146.degree. (m. p. of acetate 127-127.5.degree.). Phytosterol acetate, obtained by Klostermann's method, m. 137.5-138.degree.. Mixts. of the fat with lard could not be detected by B.hivin.omer's method. References to the literature and illustrations are given.

L2 ANSWER 44 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1912:10061 Document No. 6:10061 Original Reference No. 6:1547c-d Composition of Oil Seeds from French West Africa. Hebert, A. Matieres Grasses, 5, 3602 (Unavailable) 1912. CODEN: MGRAAN. ISSN: 0368-9999.

AB cf. C. A., 5, 2746. *Pentadesma* leucantha A.Chev., family Clusiaceae, produces seeds contg. 50% fat (no details of latter given); almonds of *Ochrocarpus africanus* Oliv. yield 4% fat; almonds of *Carapa* Sp., family Meliaceae, yield 3% of greenish white solid fat, adapted to use as a vegetable butter. Its d21 = 0.913; m. p., 21.degree.; acid no., 2.8; sapon. no., 189.0; Reichert no., 4.73; Helmer no., 93.5; I no., 63.0; m. p. of fatty acids, 42.degree..

L2 ANSWER 45 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1911:16104 Document No. 5:16104 Original Reference No. 5:2746f-i Composition of Oil Seeds from French West Africa. Hebert, A. Matieres Grasses, 4, 2158-60 (Unavailable) 1911. CODEN: MGRAAN. ISSN: 0368-9999.

AB through J. Soc. Chem. Ind., 30, 497. These seeds come more particularly from the forest of the Ivory Coast. Dumori butter is hard and yellow, with sweet odor and taste, and is used for food and for soapmaking. The liquid fatty acids are chiefly oleic; the solid (m. p. 67-8.degree.) include acids of high m. p. (77.degree.), i. e., carnaubic, with stearic and palmitic; they are suitable for candle-making. The seed cake is poor in carbohydrates and nitrogenous constituents.;Yield of fat %,Values of fat.,Fatty acids.,Kernels.,Entire seeds.,d15.,m. p.,Acid no.,Sapon. no.,Reichert no.,Hegner no.,I no.,m. p.,Solids %,Liquid %.;Dumoria heckeli (Dumoria butter)....,40,14,0.956,34.degree.,5.6,188,0.8,96.8,56.4,60.degree.,33,67;Chrysophyllum d'azope.....,10,25,0.907,4.degree

...,184.4,...,92.0,88,35.degree.,...;Carapa microcarpa (Kobi butter),...,50,35,0.895,16.degree.,8.4,188,3.3,92.0,58,28.degree.,55,45; liq. at;Balanites tieghemi.....,10,2,0.908,- 3.degree.,9.4,...,6.0,92.5,121,35.degree.,63,37;Ricinodendron africanum.....,35,8.7,0.937,20.degree.,16.8,185,1.5,93.0,87.6,43.d egree.,70,30;sol. at;Saccoglottis gabonensis.....,54,...,0.900,- 2.degree.,...,188,5.5,...,85.8,...,....;Pentadesma butyracea (Lamy butter),...,0.899,32.degree.,16.0,199,0.3,95.2,68.5,60.degree.,10, 90; (Abs. in Bull. soc. chim., 9, 662-72).

L2 ANSWER 46 OF 47 CAPLUS COPYRIGHT 2003 ACS on STN

1911:2250 Document No. 5:2250 Original Reference No. 5:386d-i,387a-i,388a-e Some New and Little Investigated Oil Fruits. Grimme, Cl. (Sci. Asst. Bot. Inst. of Hamburg). (Conclusion). Chem. Rev. Fett-Harz-Ind., 17, 263-9 (Unavailable) 1911.

AB cf. C. A., 4, 2885; 5, 219. 20. Allophyllus racemosus L. of Asia and Australia called "hangoladel" in Ceylon. A tall tree with white round seed, 1 cm. diam., with dark-brown kernel; 9.25% shell and 90.75% kernel. Ether extraction yields 22.3% of a brown, solid, crystallin fat. The residue contains 21.6% protein. 21. *Pentadesma butyracea*, Sab., on Sierra Leone, Coast of West Africa; a large, broad tree, 100-120 feet high. Synonyms: *Chlorophora tenuifolia* Engl., *Sideroxylon densiflorum* Parker, ob.acte.a (in St. Thomas), matapassa (Principe), tallow tree. Its meaty fruit is called ma.cdll.ca de ob.acte.a (St. Thomas) and mamao (Principe); it has the shape of a quince, 10-12 cm. long, 7-9 cm. diam. The skin is chestnut-brown, the edible meat is yellow, juicy, and quite sour. The fruit contains 2-3 chocolate-brown oval seeds, 4-5 cm. X 1-2 cm., called kanya nuts, which furnish on ether extraction 46.6% kanya butter, a white solid fat. The extracted residue contains 6.4% protein. 22. *Garcinia balansae* Pierre of India. The seeds are 2-3 cm. X 1.5 cm.; their skin is brown and contains a brown almost smooth kernel. The seed weighs 2-3 g., with 4.8% shell and 95.2% kernel; the fat yield is 63.4%, liquid and of dark-brown color. The extracted residue contains 21.85% protein. 23. *Calophyllum inophyllum* L., of the Guttiferae. Found from East Africa across East India as far as Polynesia. They are tall trees with round fruits weighing 6.5 g., the kernel weighing 2 g. The fruit is known as laurel nuts, while the seed is known commercially as idol seeds or dilo seeds, 1.5-2.0 cm. in diam., furnishing 60.4% of a dark green, aromatic oil, semi-drying. The green color of the oil is due to a high % of resin which can be removed by boiling with alc. or by shaking with dil. soda soln. when its color turns yellowish brown. The constants for the oil refer to the green, resinous oil while the constants of the fatty acids are given for the acids free from resin; the latter are grayish brown and crystallin. The extracted residue contains 26.2% protein. The oil is used by the natives as a remedy for rheumatism. 24. *Bertholletia excelsa* H. et B., belonging to the Lecythidaceae. It is a native of South America, along the Orinoco and Amazon. It is a beautiful majestic tree, 120 ft. high. The fruit is a large ellipsoidal pod, the meaty endocarp of which is much thicker than the smooth exocarp. The pod contains 16-20 seeds which are 3-5 cm. long, three-edged and kidney-shaped. Its thick, hard and woody shell is grayish brown and contains a seed of rust color, white inside, oily and fleshy, of agreeable taste. It is commercially known as Pa.acte.ra nuts [or Brazil nuts]. Ether extraction of the kernel, which composes 43% of the seed yields 65.8% of a colorless, odorless and tasteless oil. By long standing the oil turns turbid due to separation of the glycerides of solid fatty acids. It turns rancid easily. The fatty acids are solid, of yellowish brown color. The residue contains 51.4% protein. 25. *Poga oleosa* Pierre, a 60 ft. tree of the west coast of Africa. The fruit has a meaty exocarp and a thick woody endocarp, with 4 compartments, each containing a seed, one or two frequently remaining steril. The seed, called Inoy kernels, is oval 2 cm. X 1 cm., its shell is hard and of cinnamon color; the white, soft kernel yields 55.3% of a light yellow, nondrying oil; 25.8% shells and 74.2% kernel. The oil has neither odor nor taste. The fatty acids are light

yellow, of buttery consistence. The extracted residue contains 44.83% protein. 26. *Telfairia pedata* Hook, belongs to the Cucurbitaceae and is one of the most prominent oil-producing plants of East Africa; it is cultivated for its edible seeds. It is a perennial climbing plant with a trunk 45-90 ft. long, covering trees completely with its foliage along the edges of the forests. Its fruit is a very large greenish brown cucumber, 3 ft. long and 1 1/2 ft. diam. each containing up to 200 seeds. The seeds are of the size of a dollar, covered with a light brown tough fiber. Its shell is about 2 mm. thick, covering a white kernel of mild taste, with a greenish, very bitter skin. On account of the tough fibers and the bitter skin, no commercial use is made of the fruit. The seed has 42% shell and 58% kernel. Ether extraction yields 60.75% of oil of good quality, with pleasant odor and without taste, light yellow and slightly drying. The fatty acids are white and crystallin. The extracted residue contains 65.6% protein. 27. *Telfairia occidentalis* Hook, a cultivated climbing plant of West Africa. Its habitat corresponds to that of no. 26. The whitish seeds are discs of 25 mm. diam. and 8-12 mm. thickness. It consists of 31.2% shell and 68.8% kernel, the latter containing 48.2% of a dark brown oil, viscous and drying. The fatty acids are dark brown and crystallin. The residue contains 50.2% protein. 28. *Citrullus* sp. a cucumber species of Southwest Africa. The seeds are 1 X 0.5 cm., egg-shaped and cream-colored. Ether extraction yielded 11.8% of oil on the basis of the whole seed. The oil is light yellow, thin, slightly drying, odorless and of pleasant taste. The fatty acids are solid, and of yellow color. The residue contains 10.4% protein. 29. Oil nuts from Singapore, probably of the Lauraceae; round, flat seeds of hazelnut size, 1.0-1.2 cm. diam. and 0.5 cm. thick. The shell is thin and brown, covering a white kernel with a green center, turning dark green in air; the seed weighs 1.5 g., 2.5% of which is shell and 97.5% kernel. Ether extract yields 38.5% of a solid fat, crystallin and grayish green. The fatty acids are crystallin and greenish brown. The extracted residue contains 21.2% protein. Oil., 20., 21., 22., 23., 24.; Sp. gr. ...., 0.8983, 0.9165, 0.9127, 0.9415, 0.9180; (75.degree.), (30.degree.), (15.degree.), (15.degree.), (15.degree.); Solidification p. ...., 61.0.degree., 38.5.degree., 3.2.degree., 4.5.degree., 2.5.degree.; n. ...., 1.4629, 1.4617, 1.4682, 1.4772, 1.4643; (60.degree.), (25.degree.), (40.degree.), (15.degree.), (25.degree.); Acid no. ...., 136.7, 26.4, 19.9, 67.5, 79.40; Calc. to free oleic. ...., 68.31.degree., 13.32.degree., 9.99.degree., 34.04.degree., 39.71.degree.; Sapon. no. ...., 242.2, 197.0, 176.3, 198.7, 202.0; Ester no. ...., 105.3, 170.6, 156.4, 131.2, 122.6; Iodine no. (Wijs) ...., 39.4, 42.3, 86.2, 95.3, 98.3; Fatty acids, % ...., 95.76, 96.1, 93.18, 78.3, 96.82; Glycerol, % ...., 5.75, 9.32, 8.55, 7.17, 6.70; Unsaponifiable, % ...., 2.31, 0.92, 4.23, 0.35, 0.85; Resin, % ...., 18.26, ...; Fatty acids, 20., 21., 22., 23., 24.; Solidification p. ...., 60.5.degree., 54.5.degree., 30.3.degree., 32.5.degree., 27.0.degree.; n. ...., 1.4567, 1.4429, 1.4564, 1.4656, 1.4528; (60.degree.), (60.degree.), (60.degree.), (45.degree.), (45.degree.); Neutralization no. ...., 226.5, 198.7, 161.8, 192.3, 196.7; Iodine no. ...., 39.9, 42.8, 89.1, 94.8, 99.2; Mean mol. wt. ...., 248.0, 279.7, 341.4, 289.0, 286.6; Oil., 25., 26., 27., 28., 29.; Sp. gr. ...., 0.9085, 0.9185, 0.9135, 0.9158, 0.9021; (15.degree.), (15.degree.), (50.degree.), (15.degree.), (50.degree.); Solidification p. ...., -5.0.degree., 8.5.degree., -2.5.degree., -11.5, 41.5; n. ...., 1.4700, 1.4686, 1.4763, 1.4751, 1.4549; (15.degree.), (15.degree.), (20.degree.), (15.degree.), (40.degree.); Acid no. ...., 4.20, 2.44, 61.54, 6.52, 52.06; Calc. to free oleic, ...., 2.14%, 1.19, 29.66, 3.28, 26.18; Sapon. no. ...., 177.5, 186.5, 262.2, 195.6, 169.5; Ester no. ...., 173.2, 184.1, 200.7, 189.1, 117.4; Iodine no. (Wijs) ...., 91.1, 84.2, 43.4, 119.5, 38.9; Fatty acids, % ...., 95.83, 96.20, 96.2, 95.9, 95.85; Glycerol,

%.....,9.46,10.06,10.96,10.33,6.41;Unsaponifiable,  
 %.....,0.35,0.34,0.38,0.28,1.37;Fatty acids.;Solidification  
 p.....,24.5.degree.,41.8.degree.,39.5.degree.,33.0.degree.,53.  
 5.degree.;n.....,1.4499,1.4492,1.4613,1.4568,1.442  
 4,,(45.degree.), (50.degree.), (50.degree.), (45.degree.), (55.degree.);Neutra  
 lization no.....,153.3,209.1,221.0,194.5,207.2;Iodine  
 no.....,93.6,86.7,45.9,122.3,38.2;Mean mol.  
 wt.....,362.1,265.8,251.5,285.8,268.3;

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1909:13717 Document No. 3:13717 Original Reference No. 3:2515a-d  
 Examination of African Vegetable Fats. Krause, M.; Diesselhorst, Dr.  
 Tropenpflanzer, 13, 6 From: Rev. Fett-Harz-Ind., 16, 200-1 (Unavailable)  
 1909. CODEN: TROPA3. ISSN: 0372-1272.

AB Physical constants of 3 new fats are given as follows: %fat in kernels.,M.  
 p.,Sp. gr. 17.5.,ND50.,I no.,Sapon. no.,I no. of free fatty acids.,M. p.  
 of free fatty acids.,Solidifying point of oil.;No. 1.....,54.5,43-  
 46.degree.,0.8736,1.4503,37.48,188.6,38.25,60.degree.,.....;No.  
 2.....,53.8,.....,0.9354,1.4830,177.3,192,187.4,....,-33.degree.;No.  
 3.....,52.24,.....,0.9333,1.5068,123.9,189.9,.....,....,-22.degree. No.  
 1 comes from **Allanblackia** stuhlmanni, an East African tree  
 bearing fruit 22 cm. X 15 cm., containing about 30 brown kernels each of  
 the size of horse chestnuts, whose fat is edible, but promises to become a  
 good substitute for lanolin. No. 2 comes from a vine Plukenetia conophora  
 (Burseraceae) from Ossidinge, Kamerun, bearing nuts of walnut size, which  
 contain a drying oil similar to linseed oil; is used as food by the  
 natives. No. 3 are the Ojok fruits of Ossidinge, Kamerun, of hazelnut  
 size, weighing 2 g., the kernel 1-1.2 g. The oil is obtained by pressing  
 and is used as food; the kernels adhere somewhat to the shell. None of  
 the fats contain any poisonous matter as shown by experiments on animals.

=> s stost and spread and emulsion

10 STOST  
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 177403 EMULSION

L3 0 STOST AND SPREAD AND EMULSION

=> s sos and spread and emulsion

4770 SOS  
 57629 SPREAD  
 177403 EMULSION

L4 2 SOS AND SPREAD AND EMULSION

=> d l4 cbib,ab 1-2

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

2002:408458 Document No. 136:401002 Food **spread** containing  
 Allanblackia or Pentadesma fat. Floeter, Eckhard; Hendrickx, Henricus  
 Arnoldus; Van Oosten, Cornelis Willem; Stellema, Cornelis Sjouke (Unilever  
 N.V., Neth.; Unilever P.L.C.; Hindustan Lever Ltd.). PCT Int. Appl. WO  
 2002041699 A1 20020530, 17 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT,  
 AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM,  
 DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
 KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,  
 MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,  
 TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW:  
 AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR,  
 IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English).  
 CODEN: PIXXD2. APPLICATION: WO 2001-EP12273 20011022. PRIORITY: EP  
 2000-204120 20001121; EP 2001-201916 20010521.

AB An edible W/O **emulsion spread** comprises a continuous  
 fat phase which contains a natural structuring hardstock fat, which  
 hardstock fat contains .gtoreq.45 wt.% of **SOS** triglyceride

(where S is C18-C24 fatty acid residue and O is an oleic acid residue). A fat with such compn. may be isolated from plants belonging to the genus Allanblackia or the genus Pentadesma. Thus, a pre-emulsion to be used in a margarine fat blend comprises 70% rapeseed oil and 30% Allanblackia floribunda fat.

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2002:408457 Document No. 136:401001 Food **spread** containing Allanblackia or Pentadesma fat. Floeter, Eckhard; Hendrickx, Henricus Arnoldus; Van Oosten, Cornelis Willem; Stellema, Cornelis Sjouke (Unilever N.V., Neth.; Unilever P.L.C.; Hindustan Lever Ltd.). PCT Int. Appl. WO 2002041698 A1 20020530, 16 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-EP12272 20011022. PRIORITY: EP 2000-204120 20001121; EP 2001-201916 20010521.

AB An edible W/O-emulsion **spread** is formed in which the fat phase comprises a vegetable hardstock fat, the hardstock fat contg. .gtoreq.5 wt.% of Allanblackia fat and(or) Pentadesma fat and which preferably contains .gtoreq.45 wt.% of **SOS** triglycerides (where S denotes a fatty acid residue with a satd. C18-C24 carbon chain and O denotes an oleic acid residue). Thus, a pre-emulsion to be used in a margarine fat blend comprises 70% rapeseed oil and 30% Allanblackia floribunda fat.